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09/402,726	10/08/1999	GERHARD KOCK	KOCKPCT	6324

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EXAMINER

MICHALSKI, JUSTIN I

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/402,726

Applicant(s)

KOCK, GERHARD

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6-8 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 16 December 2004 have been fully considered but they are not persuasive.

Applicant argues page 3, line 10 through page 4, line 2 that the microphones of Ohkubo et al. are parallel to each other and do not point to a central point. The Office respectively disagrees since Fig. 10 clearly shows microphones 41, 42, and 43 directed towards sound source S.

The applicant further argues page 4, lines 4-10 that Ohkubo et al. does not show an addition circuit for the arrangement according to Fig. 10. The Office respectively disagrees since Fig. 1 shows a microphone device according to the invention. Fig 10. discloses an alternate embodiment of the invention with the microphones arranged on a circumference (Col. 7, lines 35-44).

2. The following rejection stands as in previous office action mailed 18 June 2004.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 2, 6, 7, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohkubo et al. (US Patent No. 5,862,240).

Regarding claim 16, Ohkubo et al. (hereinafter, "Ohkubo") discloses a microphone device which includes at least three microphones (M1, M2 and Ma) disposed in the state spaced by predetermined distances in a direction perpendicular to the main axis of directivity which reads on the sound recorders displaying directional characteristics and are arranged that the axes (R1, R2 and Ra) of their main receiving directions each point to a reference position (sound source S) within a utility zone (abstract and see figure 10). Ohkubo further discloses an adder for adding output signals from the respective microphone elements (abstract and figure 1), which reads on a summation facility for the amplitudes of the signals.

Regarding claim 2, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo further discloses the microphones are arranged on the circumference so that they are positioned an equal distance ($R1=R2=R3$) with respect to the sound source S (see figure 10 and col. 7-lines 37-42), which reads on the claimed limitation.

Regarding claim 6, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo further discloses the sound recorders are microphones, which reads on acoustic-electric transducers (see figures 1, 8, 10 etc.).

Regarding claim 7, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo further discloses introduction holes (31A, 32A, 33A, see figure 13), which reads on input valves, and are fed to acoustic-electric transducer 35.

Regarding claim 15, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo discloses three microphones disposed in a single plane which may be arranged on the circumference so they are positioned at equal distances $R1=R2=R3$ which reads the claimed limitation.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 4, 8, 10, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo et al. (US Patent No. 5,862,240).

Regarding claim 3, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo does not show the varying distances, however, Figure 10 shows time delays, which reads on transmission time elements. It would have been obvious to one of ordinary skill that a time delay would exist due to the transmission distance from

the sound source to the microphones.

Regarding claim 4, Ohkubo discloses everything claimed as applied above (see claim 3). Ohkubo further discloses the transmission time elements, which reads on time delays wherein the transmission dimensions (31, 32, 33) provide different passages however the distances are equal to each other (col. g-lines 31-50 and figure 13). Therefore it would have been obvious to one of ordinary skill in the art to provide transmission dimensions that are consistent of equal of all the sound recorders but can have different passage paths, which are adjustable in the sense that they are constructed differently.

Regarding claim 8, Ohkubo discloses everything claimed as applied above (see claim 16). It would have been obvious to one of ordinary skill in the art to provide a focal distance for the ideal position for the embodiment of Figure 10, otherwise it would have provided a poor result.

Regarding claim 10, Ohkubo discloses everything claimed as applied above (see claim 16). It would have been obvious to one of ordinary skill in the art to manually move the microphone arrangement as a whole to follow a moving sound source, which reads on adjusting an arrangement of sound recorders to follow the set point.

Regarding claim 11, Ohkubo discloses everything claimed as applied above (see claim 10). It would have been obvious to one of ordinary skill in the art to provide a manual swivel or tripod for support and aiming for moving the microphone arrangement as is conventionally done.

Regarding claim 12, Ohkubo discloses everything claimed as applied above (see claim 10). It would have been obvious to one of ordinary skill in the art to manually move the microphone arrangement as a whole to follow a moving sound source, which would result in manually controlling the transmission time elements or time delays via the manual movement (i.e. moving closer to produce smaller time delays or further away for longer time delays).

7. Claim 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo et al. (US Patent No. 5,862,240) in view of Sibbald et al. (US Patent No. 5,600,727).

Regarding claim 13, Ohkubo discloses everything claimed as applied above (see claim 16). Ohkubo fails to disclose a positive structure for determining the position of the sound source. The claim states that determining the position of the sound source "can be" done by measuring the time delay variances of the sound recorders. Sibbald et al. (hereinafter, "Sibbald") discloses deriving the distances and displacement of the microphones from a reference point by measuring the time-of-flight measurements, which reads on measuring the time delay variances (abstract) and therefore provides the position of the sound source in relation to the microphones. It would have been obvious to one of ordinary skill in the art to modify Ohkubo in view of Sibbald to provide the position of the sound source via the measurement of the time delay variances of the sound recorders for accurate sound set point position for better overall recording.

Regarding claim 14, Ohkubo discloses everything claimed as applied above (see claim 16). Sibbald further discloses a signal processor 30 inspects the signals of the microphones wherein the transmission time element (time delay) is determined by the signal processor (col. 3-lines 10-22).

Allowable Subject Matter

8. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2644

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (571)272-7524. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM



SINH TRAN
31 SEP 2010 SUPERVISORY PATENT EXAMINER